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ABSTRACT

These planning guides are intended to help vocational rehabilitation programs and agencies identify important issues during preliminary discussions concerning possible use of assistive technology and technology-related services. They are designed to evaluate the effectiveness of current technology-related services, to implement or expand assistive technology services, and to develop quality assurance and program evaluation procedures. The guides were designed to be used in developing statewide technology service programs, but can also be utilized with individual technology units. The guides consist primarily of program evaluation forms provided in a questionnaire format. The materials are organized into four main sections: (1) guides for preliminary planning (includes setting service parameters, determining need for assistive technology services, consumer involvement, identifying program strengths/limitations, and integrating technology services); (2) guides for program development (includes deciding what services to offer, staff/personnel needs, selecting a service delivery model or approach, planning flow of services, and funding/program support); (3) guides for resource utilization (includes coordination of services, information resources, training resources, utilizing volunteers, and funding/program support); and (4) other (includes guides on set-up/layout, marketing, and quality assurance). A glossary defines assistive technology services, different impairments, service delivery models, and types of assistive technology. (CR)

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Assistive Technology Services

PLANNING GUIDES

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Assistive Technology Services

PLANNING GUIDES

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PLANNING GUIDES

Introduction

Planning and implementing assistive technology services is a process which involves consideration of a large number of factors and variables. There is no one "correct" approach or simple formula which will work for all settings and situations. Important in this process is that program planners consider as many of the variables as possible to insure that full benefit can be obtained from existing resources and that implementation of new services meet the needs that have been identified.

Developing sufficient awareness of what factors should be considered is a challenging task. The subtle realities unique to each situation require that a comprehensive, careful planning and review process be established to set-up and monitor technology service delivery. There are similarities between what needs to be done in small rehabilitation hospitals interested in establishing technology services for their in-patient population and comprehensive assistive technology grant projects attempting to set-up a statewide network of services. The materials presented in these planning guides identifies many of these considerations.

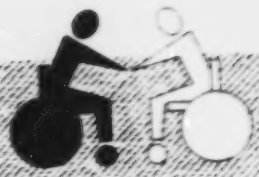
Purpose of the Guides

The Assistive Technology Services Planning Guides have been designed to help programs and agencies as they:

- initiate preliminary discussions concerning possible use of assistive technology and technology related services
- evaluate the effectiveness of current technology related services
- implement or expand assistive technology services
- develop quality assurance and program evaluation procedures

These "guides" are intended to be used as a tool to assist in the identification of important issues and to present questions which need to be addressed. Program planners and managers should assemble informed consumers, appropriate technology specialists and interested service providers to utilize the information available and to obtain the local insights needed and then work together in designing assistive technology services which will work effectively.

SECTIONS



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HOW TO USE THE GUIDES

Information is organized into four main sections:

- Preliminary Planning
- Program Development
- Resource Utilization
- Other

Within each section there are a series "guides" which focus on selected components and considerations for assistive technology service delivery. These "guides" begin by reviewing their basic "considerations" followed by questions on important issues and variables. Together this information assists in planning and coordinating the use of assistive technology services. Originally intended for use with development of statewide technology service programs, the guides also can be utilized effectively with individual technology units.

Project planners can utilize the guides in a variety of ways. Use as discussion outlines for planning and advisory groups will facilitate the planning and preparation process. Providing at least a basic structure to follow, the series of guides will assist in targeting key issues and common concerns. Gathering information necessary for technology services can also be initiated by using various parts of the guides.

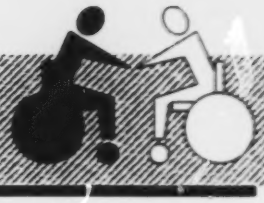
Monitoring existing service delivery projects can be accomplished as well. Suggestions for setting up program monitoring procedures and developing quality assurance standards will help to strengthen service delivery activities. With the importance of training existing and new staff, the guides can be utilized as training modules or to identify curriculum content.

The guides do not cover all aspects of assistive technology services. Although they can be used as a "checklist" for service implementation, it should be emphasized that more extensive individualized planning tailored to particular needs of the program, region or state is essential. The most effective uses of the Planning Guides are to help generate questions and identify issues which need to be addressed in the delivery of assistive technology services.

PRELIMINARY PLANNING

- Setting service parameters
- Determining need for assistive technology services
- Consumer involvement
- Identifying program strengths/limitations
- Integrating technology services

SETTING SERVICE PARAMETERS



CONSIDERATIONS

Prior to initiating indepth planning for assistive technology services a look at the overall scope and intended purpose of utilizing assistive technology services is necessary. The following questions identify basic considerations which should be reviewed by key staff from all programs/agencies which anticipate being involved.

Discussion of these "basic considerations" should identify additional planning needs that may need to be addressed. Aspects of these may be covered in other planning guides in Preliminary Planning Program Development or Resource Utilization.

What are your goals or expectations from the use of assistive technology services?

Describe:

_____

_____

_____

_____

What population(s) are you targeting services toward?

Describe:

_____

_____

_____

_____

Have decisions been made on tentative requirements for eligibility? **YES** ❑ **NO** ❑

If yes, briefly describe:

_____

_____

_____

What general areas of services are being considered?

- ❑ Information and referral services
- ❑ Technical assistance/training
- ❑ Research/product development
- ❑ Equipment sales/service
- ❑ Clinical services
- ❑ Other

Have needs for staff members or (new) staff positions been identified? **YES** ❑ **NO** ❑

Have position descriptions and definitions of services been developed or obtained? **YES** ❑ **NO** ❑

What funding/program support resources are available?

Describe:

Will other programs/agencies be directly involved in services? **YES** ❑ **NO** ❑

If yes, list and describe type of involvement:

Additional Information:

DETERMINING NEED FOR ASSISTIVE TECHNOLOGY SERVICES

CONSIDERATIONS

Developing assistive technology services requires accurate information on current and projected needs. A thorough review should be made of existing needs assessment efforts which may provide sufficient information for assistive technology services. If data is not available then initiation of some type of needs assessment may be necessary. While needs assessment information is very critical to successful assistive technology services, it is also important to use existing resource information and avoid unnecessary surveys and studies. Multiagency efforts in combining available information or supporting joint needs assessment activities should be encouraged.

What statewide needs assessment efforts related to individuals with disabilities have been made in the past three years?

_____

_____

_____

Is there existing needs assessment data available which relates to assistive technology services?
YES ❑ **NO** ❑

If Yes, identify: _____

_____

_____

Is there an office in state government or some centralized resource which collects information on individuals with disabilities? **YES** ❑ **NO** ❑

If yes, what assistance is available?

_____

_____

_____

Is it necessary to conduct a seperate needs assessment effort specifically for assistive technology services? **YES** ❑ **NO** ❑

If yes, what resources (staff/funds/cooperative agreements, etc.) have been identified?

_____

_____

What preparations have been made to involve consumers in the needs assessment efforts?

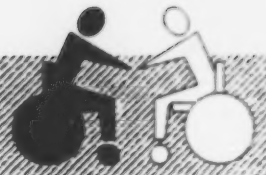
Describe:

Is it feasible to establish a needs assessment advisory group comprised of major programs/agencies serving individuals with disabilities? **YES** ❑ **NO** ❑

If yes, what programs/agencies should be involved?

Additional Information:

CONSUMER INVOLVEMENT



CONSIDERATIONS

Developing an assistive technology service program that effectively meets the needs of the "users" of the technology should be the ultimate goal of any program. Essential in making this possible is meaningful involvement of individuals with disabilities in planning, implementation and monitoring. The questions which follow identify important resources and considerations which should be discussed. Development of a written summary of consumer involvement efforts may be useful.

What consumer advocacy organizations are there in your state/area?

- ❑ Association for Retarded Citizens
- ❑ Cystic Fibrosis
- ❑ Council on Aging
- ❑ Easter Seals
- ❑ Head Injury Association
- ❑ Multiple Sclerosis
- ❑ Muscular Dystrophy
- ❑ Parent/Educator Group
- ❑ Parents of Exceptional Children
- ❑ Protection and Advocacy
- ❑ Spina Bifida Support Group
- ❑ Spinal Cord
- ❑ United Cerebral Palsy
- ❑ Other: _____

Are any of these groups or organizations actively involved with technology related services? ❑ **YES** ❑ **NO**

If Yes, identify: _____

Has a consumer advisory council been established for your assistive technology services? ❑ **YES** ❑ **NO**

If yes, what is the make-up of the group:

What will the role and function of this advisory council be?

Is there a consumer action program (CAP) available? ❑ **YES** ❑ **NO**

What efforts are planned to obtain "local" consumer input in various parts of your service area?

Additional Information:

IDENTIFYING PROGRAM STRENGTHS/LIMITATIONS

CONSIDERATIONS

Implementation of assistive technology services should be built upon existing assets and strengths as much as possible. An inventory of the overall characteristics of your program/agency followed by a more indepth analysis of technology related factors is needed to establish a strong program support base. To the extent possible, assistive technology service areas should match closely with the strengths and general orientation of your program/agency.

What is the primary goal/mission of your program/agency?

_____

_____

_____

_____

_____

_____

What are the primary service areas of your program/agency?

- ❑ Independent living
- ❑ Vocational rehabilitation
- ❑ Education (public school)
- ❑ Recreation
- ❑ Therapy services:

  _____

  _____

  _____

- ❑ Vocational training
- ❑ Professional education
- ❑ Other education (college/university)
- ❑ Medical services
- ❑ Advocacy
- ❑ Other:

  _____

  _____

Rate your program/agency strengths **(+)** weaknesses **(-)**

- ____ Program planning
- ____ Program funding
- ____ Staff recruiting/development
- ____ Facilities
- ____ Fee for service
- ____ Internal management
- ____ Service provision
- ____ Follow-up
- ____ Billing/collecting
- ____ Quality assurance
- ____ Information resources
- ____ Outreach/external communications

Does your program/agency have existing technology related services available? ❑ **YES** ❑ **NO**

If yes, describe:

What existing staff have specific expertise in assistive technology services?

STAFF	**AREA OF EXPERTISE**

Additional Information:

INTEGRATING TECHNOLOGY SERVICES

CONSIDERATIONS

Assistive technology services should be an integral part of regular programming. Utilization of technology related services should be an option that can be utilized at any point in the time frame of service provision. This would include eligibility determination through post graduation or post employment follow-up.

Are rehabilitation engineering/assistive technology services provided in your agency/program as routine services? **YES** ❑ **NO** ❑

If yes, describe:

_____

_____

_____

_____

Do case management and regular service procedures have specific decision points where the use of technology resources/services is considered? **YES** ❑ **NO** ❑

If yes,when/where:

_____

_____

_____

What is the awareness level of overall staff concerning technology resources/services?

Strong		**Adequate**		**Weak**
5	4	3	2	1

Are eligibility decisions made for individuals your program/agency accepts for services?
YES ❑ **NO** ❑

If yes, are assistive technology resources/services routinely used in making these decisions?

_____

_____

_____

_____

Is there funding separate or clearly identified funding available for technology related services?

If so, describe level/source:

_____

_____

_____

_____

How are technology resources/services coordinated?

- ❑ Centralized with assistive technology specialist
- ❑ Designated to specific staff with other responsibilities
- ❑ Left up to department/ regional supervision
- ❑ Included as part of:

  _____
- ❑ No coordination structure exists

What staff have specific responsibility for technology related services?

POSITION	RESPONSIBILITY	% TIME
_____	_____	_____
_____	_____	_____
_____	_____	_____

Have they received specific training related to their areas of responsibility? **YES** ❑ **NO** ❑

Type/Degree:

_____

_____

_____

Additional Information:

_____

_____

_____

_____

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_____

PROGRAM DEVELOPMENT

- Deciding what services to offer
- Staff/personnel needs
- Selecting a service delivery model or approach
- Planning flow of services
- Funding/program support

DECIDING WHAT SERVICES TO OFFER

CONSIDERATIONS

The field of assistive technology encompases a broad range of services and areas of technology. It is important that programs carefully select those services/areas which meet identified needs of consumers, match well with available staff qualifications and can be effectively provided.

Depending on staff available, it may not be feasible to offer a full range of services. The selection of services and areas of technology should avoid offering services which do not have sufficient staff or program resources available. Adding services in phases may be an approach worth considering.

What types of assistive technology services will you provide?

- ❑ Information
- ❑ Referral
- ❑ Assessment/recommendation
- ❑ Consultation/technical assistance
- ❑ Funding assistance consultation
- ❑ Loan of equipment (Free)
- ❑ Rental of equipment
- ❑ Commercial equipment (sales)
- ❑ Fit commercial equipment
- ❑ Modify equipment
- ❑ Custom design and fabrication
- ❑ Repair and maintenance
- ❑ Follow-up
- ❑ Professional ed. and training
- ❑ Training (client/caregiver)
- ❑ Product demonstration center- (public)
- ❑ Advocacy

What categories of assistive technology aids/devices will you include?

AIDS FOR DAILY LIVING
- ❑ Aids for daily living/ personal care

MOBILITY TECHNOLOGIES
- ❑ Mobility aids (for visually impaired)
- ❑ Standing/walking aids
- ❑ Manual wheeled mobility
- ❑ Power wheeled mobility
- ❑ Driving and transportation aids

POSITIONING/MANIPULATION
- ❑ Seating and positioning
- ❑ Prosthetics and/or orthotics
- ❑ Functional electrical stimulation
- ❑ Robotics

COMPUTER ACCESS
- ❑ Computer access and use

ENVIRONMENTAL ACCESS
- ❑ Worksite/school design and/or modification
- ❑ Home modification
- ❑ Accessible architectures
- ❑ Adapted furniture
- ❑ Environmental control

RECREATION
- ❑ Sports and leisure
- ❑ Adapted toys

COMMUNICATION
- ❑ Augmentative comm / speech aids
- ❑ Alarm/emergency call systems
- ❑ Telephone comm. aids
- ❑ Assistive listening devices
- ❑ Visual/reading aids
- ❑ Cognitive and learning aids
- ❑ Other

_____
_____
_____
_____

Are there other programs or agencies locally available who provide some of these services and technical support? **YES** ❑ **NO** ❑

	Services/Areas

What services or areas of technology are not included?

Are there services or areas of technology specialization which could be phased in at a future time? **YES** ❑ **NO** ❑

If yes, which ones:

What services or areas of technology is your program or agency most qualified to provide?

What services or areas of technology are most needed by consumers?

Additional Information:

STAFF/PERSONNEL NEEDS

CONSIDERATIONS

Identifying and obtaining qualified staff to deliver services is the single most important factor for program success. Determining what staff positions are needed and locating individuals for these positions should be a priority. Use of existing staff offers advantages and limitations. Adding technology related service responsibility to current staff should include consideration of interest, existing expertise, potential for gaining additional skills and time available.

What staff are needed to provide the scope of services planned for?

- ❑ Rehabilitation engineer
- ❑ Assistive technology specialist
- ❑ Occupational therapist
- ❑ Physical therapist
- ❑ Speech pathologist
- ❑ Orthotist/prosthetist
- ❑ Fabrication technician
- ❑ Case manager
- ❑ Funding resource specialist
- ❑ Other _____

Are there existing staff within your program/agency who can assume these responsibilities?

❑ **YES** ❑ **NO**

Identify/Describe:

_____

_____

_____

_____

_____

Will existing staff need specialized training? ❑ **YES** ❑ **NO**

If so, describe the type/nature:

_____

_____

_____

_____

_____

_____

Can technology services be contracted or arranged through other sources?

❑ YES ❑ NO

If yes, describe:

_____

_____

_____

Are there any certification or specific training/experience backgrounds required?

❑ YES ❑ NO

Describe:

_____

_____

_____

Will new staff need to be hired?

❑ YES ❑ NO

Describe:

_____

_____

_____

Are there qualified individuals available for these positions in your area?

❑ YES ❑ NO

Additional Information:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

SELECTING A SERVICE DELIVERY MODEL OR APPROACH

CONSIDERATIONS

Prior to initiating indepth planning for assistive technology services a look at the overall scope and intended purpose of utilizing assistive technology services is necessary. The following questions identify basic considerations which should be reviewed by key staff from all programs/agencies which anticipate being involved.

Discussion of these "basic considerations" should identify additional planning needs that may need to be addressed. Aspects of these may be covered in other planning guides in Preliminary Planning Program Development or Resource Utilization.

What geographic area will be served by your program?

- ❑ Statewide
- ❑ Regional
- ❑ Local:

Identify

_____

_____

_____

_____

Is the area being served by your program primarily:

- ❑ Rural
- ❑ Urban
- ❑ Combination

Are accessible transportation services available in your service area? ❑ **YES** ❑ **NO**

If no, what area(s) are not served:

_____

_____

_____

_____

What is the distance (in miles) from your home base to the farthest point of the services area?

_____ miles

Diagram your service or region area:

1. Indicate cities with population of 50,000 or more.
2. Identify locations of major existing providers of assistive technology services.

What other factors are there in terms of your geographic area or population distribution which may effect service delivery?

_____

_____

_____

What service delivery model are you likely to consider implementing?

- ❑ Center based
- ❑ Centralized
- ❑ Community
- ❑ Regional/satellite
- ❑ Mobile
- ❑ Other combinations

PLANNING THE FLOW OF SERVICES

CONSIDERATIONS

Technology service programs involve a number of components which should be organized sequentially. Documentation of the process and information needed at each step should be clearly indicated. Development of a flow chart showing component parts and decision points is recommended.

What referral methods will your program utilize?

- ❑ Telephone intake
- ❑ Written referral
- ❑ Personal contact
- ❑ Other

_____

_____

Is there a screening process for selecting appropriate referrals? ❑ **YES** ❑ **NO**

What information will you need to collect when service is requested?

- ❑ Name of Client
- ❑ Client's Address
- ❑ Client's Date of Birth
- ❑ Client's Phone Number
- ❑ Diagnosis
- ❑ Treating Physician

What preliminary paperwork is needed before the service is provided?

- ❑ Completed Intake Form
- ❑ Case History Summary
- ❑ Physician's Order/Referral Letter
- ❑ Medical Records

What paperwork will be developed to document actual services?

- ❑ Evaluation Report Forms
- ❑ Prescription Forms
- ❑ S.O.A.P. Notes
- ❑ Weekly/Monthly Progress Reports

If there is a fee for service, what will be done if no funding is available for a client?

_____

_____

How will you schedule client services in relationship to other program activities (i.e., daily, in one-hour intervals, etc.)

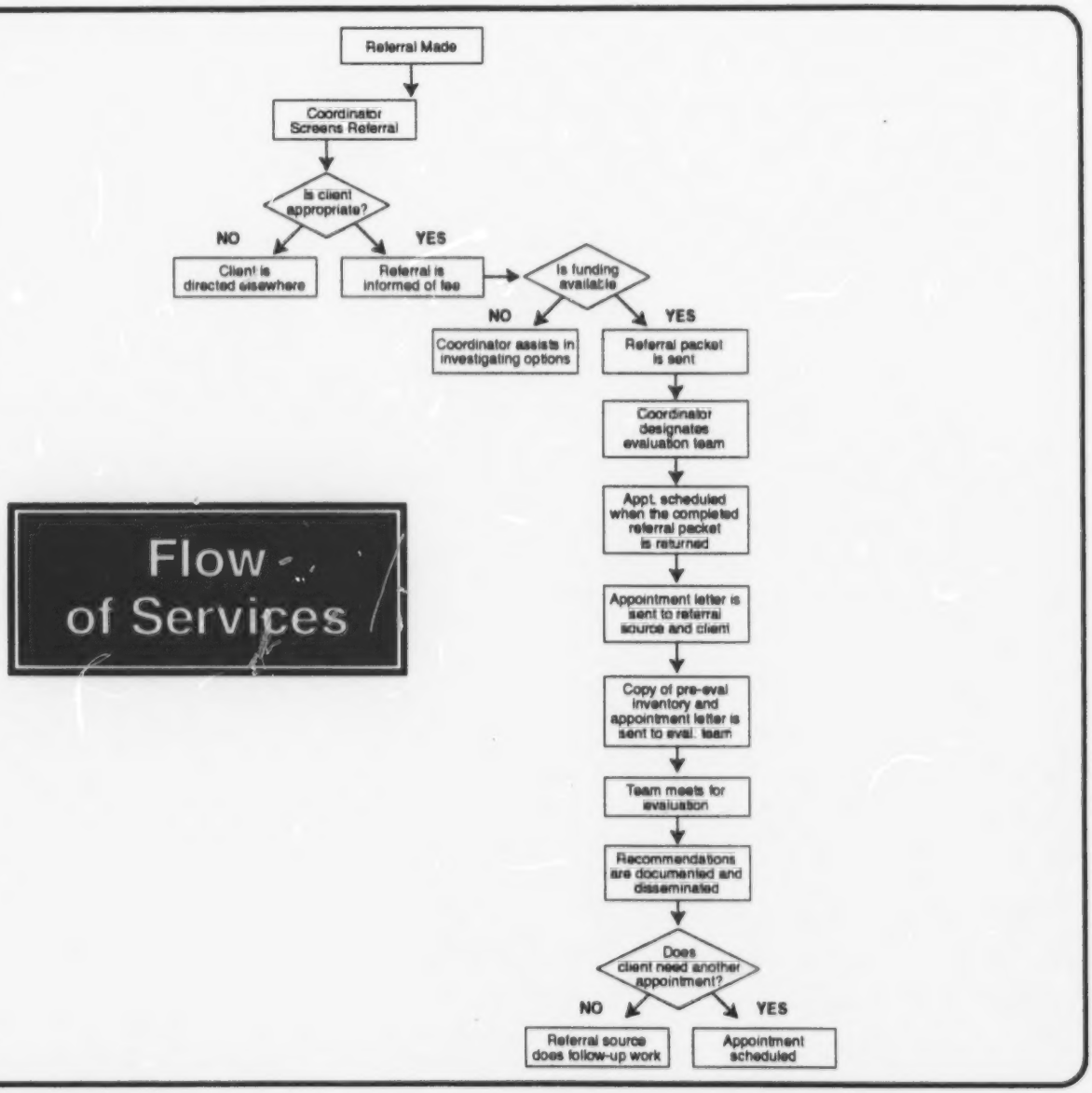
_____

_____

Have the major service components been laid out in a sequential/chronological order? ❑ **YES** ❑ **NO**

In planning services it may be helpful to diagram components and decision points.

The following outlines a sample flow of service.



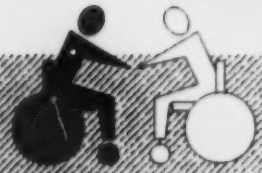
Flow of Services

Additional Information:

_____

_____

FUNDING/PROGRAM SUPPORT



CONSIDERATIONS

Identifying a funding base for assistive technology services requires a comprehensive review of available resources and a strategy for obtaining necessary support. The availability of funding is the most influential factor in determining what services are provided and in the eventual success or failure of the service program.

Efforts should be made to develop as broad a funding support base as possible so that service delivery activities will not be overly dependent on any one source of support.

What type of funding base will be used to support service delivery activities?

- ❑ Regular program/agency line item budget
- ❑ Fee for service (hourly)
- ❑ Case services budget
- ❑ Contractual services
- ❑ Other: _____

What funding sources will be used to support service delivery activities?

- ❑ Childrens Service Agencies
- ❑ Developmental Disabilities Council
- ❑ Vocational Rehabilitation
- ❑ Advocacy Organizations
- ❑ Medicare
- ❑ Medicaid
- ❑ Health Care Insurance
- ❑ Disability Insurance
- ❑ Liability Insurance
- ❑ Workers Compensation
- ❑ Other Insurance:
- ❑ Disability Organizations

_____
_____
_____
_____

- ❑ Department of Education/Special Education
- ❑ School Districts/Special Education
- ❑ Veterans Administraton
- ❑ Philantropic Groups
- ❑ United Way
- ❑ Other Charitable Groups

_____
_____
_____

- ❑ Dept. of Mental Retardation
- ❑ Aging/Programs
- ❑ Other

_____
_____
_____

Does the availability of funding restrict the services that your agency/program is now able to provide?
❑ **YES** ❑ **NO**

If yes, describe:

_____

_____

_____

Are there segments of the population served by your agency/program who have greater difficulty in obtaining assistive technology resources/services? ❑ **YES** ❑ **NO**

If yes, explain:

_____

_____

_____

- ❑ Loan-guarantee programs
- ❑ "Assistive financing"
- ❑ Subsidy Programs
- ❑ Centralized Technology "Superfund"
- ❑ Advocacy Organizations
- ❑ Others _____

If yes, describe:

_____

_____

_____

Is there a funding resource specialist position available? ❑ **YES** ❑ **NO**

Is the market (demand) for assistive technology services sufficient to support program costs/overhead?
❑ **YES** ❑ **NO**

Projections:

_____

_____

_____

_____

Do you plan to seek third party reimbursement for services? ❑ **YES** ❑ **NO**

If yes, have you applied to the health regulation agency in your state for a provider number?
❑ **YES** ❑ **NO**

Additional Information:

_____

_____

_____

_____

RESOURCE UTILIZATION

- Coordination of services
- Information resources
- Training resources
- Utilizing volunteers
- Funding/program support

COORDINATION OF SERVICES

CONSIDERATIONS

The delivery of assistive technology services is most effectively done when programs/agencies work together. Through coordinated efforts such as sharing of staff, joint funding of services or other cooperative agreements, resources available for technology related services can be most effectively utilized.

Is there a planning or coordinating council/organization established in your state to address assistive technology service delivery? ❑ **YES** ❑ **NO**

If yes, how is your program involved?

_____

_____

_____

_____

_____

Are technology related services offered by your program available to other agencies/programs?
❑ **YES** ❑ **NO**

If yes, describe: If no, why not:

_____

_____

_____

_____

_____

Is the population served by your agency/program eligible for services from other sources?
❑ **YES** ❑ **NO**

Do any of these others offer technology related services/support? ❑ **YES** ❑ **NO**

If yes, describe:

_____

_____

_____

Identify the sources of referral to your agency/program and where individuals exiting your agency/program can be referred.

Sources of Referral	Agency/Programs Offering Follow-up Services/Support

Does your agency/program:

- ❑ Share resources/staff with others?
- ❑ Pay for portions of equipment/services with others
- ❑ Participate in regional/statewide related services
- ❑ Have specific cooperative agreements with others for technology related services

Describe:

What type of marketing or outreach efforts have your agency/program completed or have planned for technology related services?

Describe:

Additional Information:

INFORMATION RESOURCES

CONSIDERATIONS

One of the core components of any service delivery program should be a strategy on how information on technology and technology related services will be made available. Access to information resources by consumers, service providers, other professionals and the general public is essential. Determining how to do this most effectively requires a look at existing resources. Are there centralized information services available? Would national information resources/systems meet program needs for dissemination?

Any program/agency planning to deliver services should have reference resources on assistive technology. A small resource collection combined with access to an information service is an essential ingredient.

Is there a centralized information service available in your state?
If yes, does it include information on assistive technology? ❑ **YES** ❑ **NO**

Describe who the service is targeted toward and what type of information is provided.

_____

_____

If no centralized information service is available, are there plans for developing one?
❑ **YES** ❑ **NO**

If yes, describe:

_____

_____

Within your program/agency, are there specific staff designated with information access/dissemination responsibilities? ❑ **YES** ❑ **NO**

If yes, describe:

_____

_____

What equipment/resources are available for use in accessing/disseminating information:

_____

_____

Which of the following sources of information on assistive technology are utilized:

	Frequently	Occassionally	Not Used
ABLEDATA (800)	❑	❑	❑
HyperABLEDATA	❑	❑	❑
Job Accommodation Network (JAN)	❑	❑	❑
Accent on Information	❑	❑	❑
Center for Special Education Technology	❑	❑	❑
National Information System (NIS)	❑	❑	❑
National Rehabilitation Information Center(NARIC)	❑	❑	❑

Is there a reference/resource library on assistive technology available in your program or agency? ❑ **YES** ❑ **NO**

What methods are being used (or considered) to disseminate/share information related to assistive technology?

	In Use	Being Considered
Centralized resource center	❑	❑
Statewide "800" telephone service	❑	❑
Computer access network	❑	❑
Newsletter	❑	❑
Other: _____	❑	❑

Is there a statewide directory of assistive technology service providers available for your state? ❑ **YES** ❑ **NO**

If yes, what categories of service providers are included?

- ❑ agencies
- ❑ organizations
- ❑ specialized programs
- ❑ consultants
- ❑ vendors/equipment suppliers
- ❑ volunteers
- ❑ other _____ _____

Additional information:

_____

_____

_____

TRAINING RESOURCES

CONSIDERATIONS

Critical to any service delivery effort is the availability of trained staff. Shortages in service delivery personnel with experience in assistive technology require that existing resources for training be fully utilized. Identification of technology related training resources is needed. In addition, a strategy for developing increased assistive technology awareness for general staff should be developed.

Does your program/agency have a training coordinator? ❑ **YES** ❑ **NO**

What technology related training is available?

_____

_____

_____

_____

Are there colleges or universities available that offer any of the following training programs?

❑ Engineering
What types:

_____

_____

❑ Occupational Therapy

❑ Computer Science

Do any of these programs offer courses or degrees in technology related areas? ❑ **YES** ❑ **NO**

If yes, which areas:

_____

_____

_____

_____

What state or regional conferences are there that may offer technology related training sessions?

_____

_____

_____

Has your program/agency offered technology related training within the past 12 months?
❑ **YES** ❑ **NO**

If yes, describe type and extent:

_____
_____
_____
_____

Prioritize the training needs in the following areas:

(1) critical need
(2) important need
(3) moderate need
(4) little need
(5) not needed

TYPES OF ASSISTIVE TECHNOLOGY:

AIDS FOR DAILY LIVING
___ Aids for Daily Living/ Personal Care

MOBILITY TECHNOLOGIES
___ Mobility Aids (for visually impaired)
___ Standing/Walking Aids
___ Manual Wheeled Mobility
___ Power Wheeled Mobility
___ Driving and Transportation Aids

POSITIONING/MANIPULATION
___ Seating and Positioning
___ Prosthetics and/or Orthotics
___ Functional Electrical Stimulation
___ Robotics

RECREATION
___ Sports and Leisure
___ Adapted Toys

COMPUTER ACCESS
___ Computer Access and Use

COMMUNICATION
___ Augmentative Comm./Speech Aids
___ Alarm/Emergency Call Systems
___ Telephone Comm. Aids
___ Assistive Listening Devices
___ Visual/Reading Aids
___ Cognitive and Learning Aids

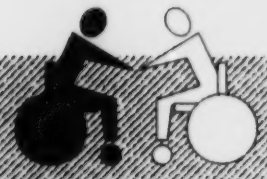
ENVIRONMENTAL ACCESS
___ Worksite/School Design and/or Modification
___ Home Modification
___ Accessible Architecture
___ Adapted Furniture
___ Environmental Control

OTHER
___ Fabrication Skills
___ Switch Construction
___ Assessment Techniques
_____
_____

Additional information:

_____
_____
_____

UTILIZING VOLUNTEERS IN SERVICE DELIVERY



CONSIDERATIONS

The resources to adequately meet the needs of the numerous individuals requiring assistive technology services are limited and in all probability will never fully satisfy the demand. Volunteer resources to supplement existing service delivery capabilities is a resource which programs/agencies should investigate. Use of volunteers has the potential of enhancing service delivery however volunteers require a well structured program with clearly defined staff role and functions.

Is there a volunteer services coordinator available in your program/agency? ❑ **YES** ❑ **NO**

Has there been any technology related work done? ❑ **YES** ❑ **NO**

Describe:

_____

_____

_____

What volunteer organizations are there in your state/area who provide technology services?

- ❑ Volunteers for Medical Engineering
- ❑ Telephone Pioneers of America
- ❑ SCORE
- ❑ _____
- ❑ _____

Identify service clubs and civic organizations active in your area:

- ❑ Lions _____
- ❑ Optimists _____
- ❑ Kiwanis _____
- ❑ Rotary _____
- ❑ Other _____

_____

Contact advocacy and disability organizations such as those listed below to locate volunteer resources in your area:

- ❑ American Heart Association
- ❑ Arthritis Foundation
- ❑ Assoc. for Retarded Citizens (ARC)
- ❑ Muscular Dystrophy Assoc. (MDA)
- ❑ National Assoc. of the Deaf (NAD)
- ❑ National Easter Seal Society
- ❑ National Spinal Cord Injury Assoc.
- ❑ Paralyzed Veterans of America (PVA)
- ❑ Red Cross
- ❑ United Cerebral Palsy Assoc. (UCP)
- ❑ Others

Are there vocational schools, colleges or universities in your area with technology related training programs? ❑ **YES** ❑ **NO**

Suggested programs to approach for volunteers identifying students as:

- ❑ engineering
- ❑ occupational/physical therapy
- ❑ speech pathology
- ❑ vocational education
- ❑ special education
- ❑ vocational rehabilitation

Additional Information:

(1) Contact Mayor's and Governor's Committees on Employment of Persons with Disabilities

(2) Approach Chamber of Commerce and business organizations

(3) Approach Parent/Educator Groups

OTHER

- Set-up /layout
- Marketing
- Quality assurance

SET-UP/LAYOUT

CONSIDERATIONS

Facilities and equipment needed for delivery of assistive technology services vary depending on the specific service, type of technology and delivery model. Determining space requirements and basic equipment will require a complete review of projected activities followed by periodic reviews. A barrier free environment should be set up so that staff who may have physical limitations can be accomodated.

What space is available for:

- ❑ Office: _____
- ❑ Clinic: _____
- ❑ Workshop/Lab: _____
- ❑ Miscellaneous (resources, demonstration area, etc.): _____

_____

Where will services be provided?

- ❑ single location
- ❑ multiple locations
- ❑ mobile
- ❑ combination
- ❑ other _____

Will fabrication or repair services be offerred? ❑ **YES** ❑ **NO**

If yes, what types:

- ❑ plastics
- ❑ metalworking
- ❑ woodworking
- ❑ electronics
- ❑ wheelchair
- ❑ vehicle maintenance
- ❑ other _____

_____

Identify building code/operating permit requirements which may apply to activities:

_____

_____

Are there restrictions on ventilation, dust, noise, etc.? ❑ **YES** ❑ **NO**

Is the physical facility/layout accessible to staff/clients with mobility impairments? ❑ **YES** ❑ **NO**

Can a staff person in a wheelchair reach and utilize supplies and equipment? ❑ **YES** ❑ **NO**

If mobile vehicles are utilized, are these equipped with hand controls, lift and necessary adaptations?
❑ **YES** ❑ **NO**

Will aids, devices or equipment be transported to other locations? ❑ **YES** ❑ **NO**

- ❑ Travel cases
- ❑ Travel case with wheels
- ❑ Portable carrier
- ❑ Protective packing/foam

For fabrication capabilities which of the following would be needed?

Portable power tools

- ❑ Screw driver (cordless)
- ❑ Variable speed 3/8" drill (cordless)
- ❑ Jig saw (cordless)
- ❑ Heat gun
- ❑ Soldering Gun
- ❑ Frying Pan (plastics)
- ❑ Propane torch
- ❑ Welder
- ❑ Grinder
- ❑ Dremel tool
- ❑ _____
- ❑ _____

Equipment

- ❑ Drill press
- ❑ Table saw
- ❑ Band saw (horizontal) (vertical)
- ❑ Belt /disk sander
- ❑ Lathe (metal)
- ❑ Welding (gas) (arc) (tig)
- ❑ Shop vacuum
- ❑ Pedestal grinder
- ❑ Tubing/pipe bender
- ❑ Sheet metal brake
- ❑ Panel saw
- ❑ Power hack saw
- ❑ Strip heater (plastics)
- ❑ Industrial sewing machine
- ❑ Electronic meters
- ❑ Air compressor
- ❑ Generator (AC)
- ❑ Vacuum pump unit
- ❑ Porta-band saw
- ❑ Milling machine
- ❑ DC power supply
- ❑ _____

Hand Tools

- ❑ Tool kit (multipurpose)
- ❑ Socket set (std) (metric)
- ❑ Wrench set (open/box) (adjustable) (std /metric)
- ❑ Screw drivers
- ❑ Files
- ❑ Rivet gun
- ❑ Soldering iron
- ❑ Cabinet clamps
- ❑ Tap and die set
- ❑ Pliers
- ❑ Vise grips
- ❑ Clamps
- ❑ Saws
- ❑ Electronic tool kit
- ❑ _____
- ❑ _____
- ❑ _____

Work Station

- ❑ Work bench
- ❑ Adjustable ht. table
- ❑ Tool cabinet
- ❑ Tool chest (portable)
- ❑ Vise/clamping jig
- ❑ Storage rack
- ❑ _____

Supplies/Materials

- ❑ Bolts
- ❑ Screws
- ❑ Springs
- ❑ Rivets, etc.
- ❑ Lumber
- ❑ Plywood
- ❑ Plastic sheet, rod
- ❑ Metal sheet rod, flat stock, tubing
- ❑ Foams
- ❑ Vinyl
- ❑ Other

MARKETING SERVICES

CONSIDERATIONS

Marketing is a vital component of any service delivery system. Public programs must be highly visible in order to reach the individuals they are designed to serve. Private programs must include a marketing component to ensure continued financial success. Marketing plans should include personnel considerations, resources for marketing, and targeted programs and populations.

What types of programs or agencies in your area serve clients in need of assistive technology?

- ❑ Rehabilitation hospitals
- ❑ Outpatient rehabilitation clinics
- ❑ Acute care hospitals
- ❑ Home health agencies
- ❑ Nursing homes
- ❑ Clinics for specific neurological disorders (MD, MS, ALS)
- ❑ Schools
- ❑ Mental retardation agencies
- ❑ Vocational rehabilitation programs
- ❑ Work hardening programs
- ❑ Workers compensation agencies
- ❑ Other _____

What professional staff may utilize or be in need of information on assistive technology?

Therapists:

- ❑ Speech-language pathologists
- ❑ Occupational Therapists
- ❑ Physical therapists
- ❑ Recreational therapists

Teachers/School Staff:

- ❑ Special education staff
- ❑ Vision/hearing specialists
- ❑ Directors of special education

Physicians/Medical Staff:

- ❑ Pediatricians
- ❑ Orthopdists
- ❑ Neurologists
- ❑ Physiatrists
- ❑ Family practice physicians
- ❑ Insurance case managers
- ❑ Home health nurses

Other:

- ❑ Social service staff
- ❑ Insurance case managers
- ❑ Vocational rehabilitation staff
- ❑ Employers

Is there a designated staff member for marketing activities? ❑ **YES** ❑ **NO**

What resources are available for marketing?

Budget:

Postage	_____	Audiovisual contract work	_____	**Staff Time:**	
Printing	_____	Audiovisual in-house work	_____	Hours/Week	_____
Travel	_____	Telephone	_____		_____
Audiovisual	_____	Equipment	_____		_____

Considering your start-up resources, which of the following strategies will you be able to utilize in your marketing efforts?

- ❑ Telephone contact
- ❑ Mailing
- ❑ Individual meetings/presentations
- ❑ Technology equipment demonstration
- ❑ Group meetings/workshops

Check all the known organizations within your state that distribute weekly, monthly, quarterly, or annual newsletters:

- ❑ Physical Therapy Association
- ❑ Occupational Therapy Association
- ❑ Speech-Language Pathology Association
- ❑ State Augmentative Communication Association
- ❑ Easter Seals
- ❑ United Cerebral Palsy

List all newsletters to which you could submit articles or advertisements concerning technology services:

_____

_____

_____

List areas of assistive technology in which your program could provide intensive workshops and training sessions (i.e., switch making, seating and positioning, worksite modifications, etc.):

_____

_____

_____

Additional Information:

_____

_____

_____

_____

_____

QUALITY ASSURANCE

CONSIDERATIONS

When planning assistive technology services it is important to structure all aspects of services around quality assurance guidelines. This will help to integrate quality as a regular part of the programs and set the tone for professional standards. By building in quality standards from the onset, staff members will view this as a normal aspect of their job rather than an added, separate component.

When implementing technology services within the structure of an existing program or agency, what accreditation programs govern your agency?

- ❑ CARF
- ❑ JCAHO
- ❑ State Department of Education
- ❑ Department of Health
- ❑ ACDD
- ❑ Other _____

Will there be staff members designated to oversee adherence to quality standards? ❑ **YES** ❑ **NO**

If yes, list key staff to be involved.

_____

_____

_____

Has a peer review system or self study program been developed or adopted? **(See Notes)**
❑ **YES** ❑ **NO**

Discuss the frequency and scope of the review system.

Frequency of review:

_____

_____

_____

Areas of service to be reviewed regularly:

_____

_____

_____

Plan of action for the results of the review:

_____

_____

_____

Is there a written policy and procedures manual for your program? ❑ **YES** ❑ **NO**

Which of the following sections should be addressed in the manual?

- ❑ Mission/Purpose
- ❑ Organizational Structure
- ❑ Personnel Policies/Staff Job Descriptions
- ❑ Physical Facilities, Health and Safety
- ❑ Admission/Eligibility Criteria
- ❑ Description of Rights and Responsibilities of Persons Served
- ❑ Client Program Planning and Management
- ❑ Affiliation and Consultation Agreements
- ❑ Plan for Quality Assurance/Utilization Review

Check the areas unique to assistive technology services that may require the development of quality standards.

- ❑ Device Prescription
- ❑ Modification of Commercial Equipment
- ❑ Fabrication
- ❑ Device Training
- ❑ Other

Are there staff certification, licensure or credentialling requirements which may apply? ❑ **YES** ❑ **NO**

- ❑ Basic areas
- ❑ Speciality areas (ie: Seating/positioning, mobility, worksite, aug. comm., etc.)

Professional Associations:

Several professional associations have developed resources on quality assurance. Contacts could include:

- ❑ ASHA
- ❑ AOTA
- ❑ APTA
- ❑ CEC
- ❑ NAMES
- ❑ RESNA
- ❑ Others: _____

NOTES

Resources to consider for quality assurance programs for assistive technology services include the Quality Indicators, developed by the S.M.A.R.T. Exchange, and Quality Assurance: A Focus on Documentation, available from the Center for Rehabilitation Technology Services.

Other resources:

_____

_____

Additional Information:

_____

_____

_____

_____

GLOSSARY

- Assistive technology services
- Descriptions of impairments
- Service delivery models
- Types of assistive technology

GLOSSARY

ASSISTIVE TECHNOLOGY SERVICES

Technology services consist of the comprehensive process of using assistive aids, devices, modifications or compensatory strategies to benefit a person with a disability. The components of this process include:

Assessment - A complete analysis of an individual's situation with regard to the need for, and potential benefits of, the appropriate types of assistive technology or technology related services that could enhance his/her life.

Equipment - A general term to include the entire field of products, aids, devices, or other apparatus/ hardware that are commercially available, or that can be custom fabricated to assist individuals with disabilities in functioning independently.

Evaluation - A hands-on, in-person, process whereby a disabled individual is tested, measured, observed, and questioned for the purpose of determining the most appropriate and beneficial technology for his/her individual situation. Generally, evaluations are performed by specialists such as occupational or physical therapists, vendors, rehabilitation engineers, orthotists, prosthetists, or others with the adequate knowledge, skills, and abilities to provide these services.

Fabrication - The actual hands-on design, construction, assembly, or other process involved in creating a customized product or device that will solve a specific problem faced by an individual with an impairment.

Fitting - The process of installing, adjusting, and testing a product, device, piece of equipment, or other custom fabrication as it applies to benefitting an individual in some way.

Follow-Up - An ongoing quality assurance service performed to determine if a particular application of technology is appropriate and effective. Generally, a follow-up service will be performed by the professional, or equally qualified professional who performed the original evaluation, prescription and recommendation.

Information - Knowledge provided to a consumer, family member, provider, or other advocate to facilitate the delivery of appropriate technology that will help to enhance an individual's functional capabilities.

Maintenance/Repair - A service that must be performed routinely or as needed to keep products, devices, or other equipment functioning at the maximum level. Maintenance and repair can be performed by anyone who is skilled to do so, but is routinely performed by durable medical equipment vendors, and other specially trained service technicians.

Ordering - Activities to acquire specific products, devices, materials, or other equipment to be used in the application of assistive technology services. Ordering usually involves securing adequate payment for needed assistive technology.

Recommendations - A specific professional opinion with regard to the types of aids, devices, equipment, or other services within the field of assistive technology that might improve an individual's level of functioning or quality of life.

Referral - Directing or otherwise linking someone to the proper professional, program, service, or agency that will provide or play an essential part in facilitating the delivery of assistive technology.

Training - A process whereby the individual with a disability, family members, or other appropriate personnel are taught how to use a specific piece of assistive technology, product or service.

Another type of training may be "awareness" or "orientation" training whereby a professional specializing in the general field of assistive technology shares information with other professionals or consumers who are interested in acquiring an increased knowledge of the field.

GLOSSARY

IMPAIRMENTS

Physical and mental disabilities can impact functional capabilities of individuals in varied ways. These descriptions briefly describe common functional impairments which could have relevance to assistive technology services.

Physical Impairment - One of a variety of disabling conditions which limit an individual's capability to perform physical activities, including congenital defects, neuromuscular, inflammatory and/or progressively disabling diseases, cerebral vascular accident, a loss of limb, or an accidental injury.

Speech Impairment - An impairment or disorder affecting one's ability to clearly articulate spoken language.

Language Impairment - An impairment or disorder affecting one's ability to learn or use spoken or written symbols for purposes of communicating.

Low Vision - An impairment or disorder limiting one or a combination of visual functions such as light perception, central visual, peripheral vision, binocular vision, or color perception.

Blindness - An impairment referring to a complete loss of total light perception whereby individuals lose the ability to manage by visual means.

Hearing Impairment - Any degree of hearing loss by one of a variety of disorders that limit one's ability to adequately hear spoken language.

Deafness - A hearing impairment of such severity that an individual must depend primarily upon visual communication such as writing, lip reading, manual communication, and gestures.

Mentally Retardation - A condition referring to individuals who have varying degrees of below average intellectual functioning often existing concurrently with deficits in adaptive behavior and other developmental capabilities.

Cognitive Impairment - An inability to adequately function in the areas of attention, memory, thinking, problem-solving and judgment, as well as language and number.

Psychological/Behavioral - Any disorder pertaining to an individual's (inappropriate) emotion, thought, action and/or reaction to a particular situation or circumstance.

GLOSSARY

SERVICE DELIVERY MODELS

There are a variety of ways to describe approaches to assistive technology service delivery. The following terms describe basic concepts related to location of services.

Center based - Services are provided in a facility (hospital, rehabilitation hospital, or community organization) for clients who receive services (inpatient or out patient) only at that facility or from the sponsoring organization.

Centralized - Services are provided usually in a centrally-located site, although sometimes they may be provided at other locations (home, school, place of employment) for clients who receive services from the sponsoring organization or from other affiliated programs.

Community - Services are provided in the community, usually by private practitioners and consultants, and often at the location where the technology may be needed (home, school, worksite). Client age, disability, and eligibility criteria will often vary by who provides the services.

Mobile - Services are provided by an individual or assessment team that travels to the location where services may be needed (home, school, workplace). The mobile vehicle is usually equipped to provide assessment and some fabrication services. Clients may be unique to the sponsoring organization (by age, disability or eligibility criteria) or may be varied by age, disability, or eligibility criteria.

Regional/Satellite - Services are provided at more than one facility across a geographic region or state. Clients may be unique to the sponsoring organization (by age, disability, or eligibility criteria) or may be varied in terms of age, disability, or eligibility criteria.

GLOSSARY

TYPES OF ASSISTIVE TECHNOLOGY

Various categories are often used to describe the variety of aids and devices used in assistive technology. The following major areas provide one approach to classifying equipment.

Accessible Architecture - Public buildings, residential housing, or other facilities that have been architecturally designed and constructed in such a way that allows for easy access and full use by individuals with all types of disabilities. This category would include the modification of an entrance by constructing a ramp.

Adapted Furniture - Commercially available and specially adapted furniture for the home, office, or other setting that have been modified to accommodate an individual's functional limitations such as sitting/standing tolerance, balance or strength. Adaptations to furniture include raised desk legs to permit use by a person in a wheelchair, elevating seat cushions, adjustable chairs, and/or installing rollers to allow drawers to be easily opened.

Adapted Toys - Toys that have been modified, altered, or redesigned in such a way that would enable children with various disabilities to independently use and enjoy them. Examples of adapted toys often include battery powered toys with specially designed switches that allows a child to activate them, and tricycles with custom contoured seats to aid in body positioning.

Aids for Daily Living - Devices, products, tools, mechanisms, or custom fabricated apparatus specifically designed to increase an individual's ability to independently perform the daily activities essential to his/her personal hygiene and general health maintenance; i.e. eating, dressing, bathing, grooming, household chores, or other fixed daily routines.

Alarm and Emergency Call Systems - Signaling systems or other equipment that assists an individual in summoning outside help. These systems can be simple such as a buzzer located outside the house, or more complex such as a remote push-button or voice-activated system that has been pre-programmed to dial and deliver a voice message to police, EMS, or other pre-determined person or source of help.

Assistive Listening Devices - Aids or devices which enable individuals with hearing impairments/deafness to communicate/receive information. Examples include hearing aids, amplified telephone handsets, TDD's, and closed captioned decoding devices for tele-vision sets.

Augmentative Communication/Speech Aids - The application of products, aids and devices that enable a non-speaking person with severe physical and possibly cognitive impairment to communicate both expressively and receptively with others.

Computer Access and Use - Various ways and methods that enable individuals with functional limitations to access and physically use a computer. Examples include adapted keyboards, specialized software, voice input/output and enlarged visual display.

Driving and Transportation Aids - Equipment involving the altering or converting of passenger cars, trucks, and vans so that they can be operated by individuals with disabilities. Common types of vehicle modifications include hand controls, wheelchair lifts for vans, lowered flooring, powered transfer seats, reduced effort steering and braking, and wheelchair restraint systems.

Environmental Control - Usually electrical products that enable individuals to independently operate, control, or adjust lighting, room temperature, appliances, telephones, to open and close doors, and/or other tasks within their environment. Environment control systems usually operate by infrared remote control or radio frequency, and can be accessed by a variety of manual switches requiring a minimum of body movement. Systems may also operate through direct voice commands, or by a sip and puff principle.

Functional Electrical Stimulation - A process whereby electrical voltage is applied to various muscles or other parts of the body to aid in standing, walking, pain control, maintenance of the muscle tone, therapeutic exercising, and sperm recovery.

Manual Wheeled Mobility - Equipment and assistive aids that enable physically impaired individuals to become more independent in moving within their home, school or work environment. Examples include a wide variety of wheelchairs which are manually operated.

Mobility Aids (for visually impaired) - Devices that individuals with a visual impairment use to travel independently. These aids commonly include items such as white canes, electronic travel, and special lens eyewear. Use of assistive guide dogs are also included.

Power Wheeled Mobility - Equipment and assistive aids that enable physically impaired individuals to become more independent within their home, school or work environment. These are usually battery powered and includes powered wheelchairs and three wheelers, all terrain vehicles and modified bicycles.

Prosthetics and Orthotics - The evaluation for, fitting, and replacement of body parts with artificial or "prosthetic" parts; this branch also includes using braces, splints, and other measures to correct various deformities of the spine and other parts of the musculoskeletal system.

Robotics - The application of specially designed robotic arms or the adaptation of commercially available robotic systems to assist individuals with disabilities with a variety of tasks. Most commonly, these tasks are in the area of activities of daily living, and occupational situations.

Seating and Positioning - The evaluation and fitting of proper seating support to improve health maintenance, increase physical function, minimize spasticity, and prevent improper posturing. Proper seating and positioning is usually accomplished through the prescription and fitting available wheelchair cushions and supports, or the custom fabrication of appropriate systems.

Sports and Leisure - Competitive games, recreational, or leisure activities in which the rules, equipment, or in some cases a combination of both, have been modified to allow participation in, or the full enjoyment of the particular activity.

Standing and Walking Aids - Devices or other durable medical equipment designed to help ambulatory/non-ambulatory individuals to regain their ability to stand passively, rise to a standing position, and/or walk. Examples of these aids include canes, crutches, walkers, standing frames, power assisted lift chairs, and parallel bars.

Telephone Communication Aids - Adaptations to, or auxiliary equipment or devices for a telephone that enables an individual with sensory or physical impairments to use, or become more efficient in using a telephone. Examples of these aids include speaker phone attachments, volume controlled handsets, enlarged numbers on a dial pad, headsets, and flashing light attachments.

Visual/Reading Aids - Products and devices, or in some cases modified devices, designed to aid in compensating for the loss of total or partial vision. Examples of these aids include braille books, watches, or other signage, closed circuit television systems, lighting and magnification aids, and talking calculators or computers.

Worksite/School/Home Modifications - Home modifications are changes to the existing architecture that permit individuals with disabilities to enter, maneuver and function within, and independently exit a home. common home modifications usually include such things as the addition of an entrance/exit ramp, the widening of bathroom and other doors and the installations special height work areas, roll-under lavatories and sinks, and lever-type door handles. Worksite modifications can include residential type modifications, but often consist of changes in or around a disabled employee's work area enabling them to perform their job. This includes raising a desk to permit wheelchair access, changes which would allow access to a computer keyboard, the installation of revolving trays, telephone adaptations, adjustable height chairs, adaptive fixtures and jigs, and/or modifications to commercially available tools and machinery.